

REMARKS

Entry of the foregoing and reconsideration of the application identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.114 and in light of the remarks which follow, are respectfully requested.

At the outset, Applicants and Applicants' representative sincerely thank Examiner Patterson of the U.S. Patent and Trademark Office for his time and consideration in participating in a telephonic interview with Applicants' representative on September 28, 2009. During the interview, the outstanding §103(a) rejections were discussed, and in particular, the differences between the applied art and the claimed multilayer structure. The present paper is being submitted for the Examiner's further consideration of the issues.

By the above amendments, and as proposed during the interview, claim 15 has been canceled without prejudice or disclaimer, and independent claim 1 has been amended to recite that the at least one impact-resistance modifier comprises a polyolefin. In view of the cancellation of claim 15, claim 18 has been amended to depend from claim 1. In addition, claims 2, 3, 11, 16, 18 and 23 have been amended for readability purposes. Entry of the above amendments is appropriate at least because a Request for Continued Examination is being filed herewith. See 37 C.F.R. §1.114.

In the Official Action, claims 1-3, 5-11, 19, 21-25, 27 and 28 stand rejected under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 5,164,445 (*Nishida et al*) in view of U.S. Patent No. 5,039,786 (*Pipper et al*). Withdrawal of this rejection is respectfully requested for at least the following reasons.

As noted above, independent claim 1 has been amended to recite that the at least one impact-resistance modifier comprises a polyolefin. The alleged combination of *Nishida et al* and *Pipper et al* fails to disclose or suggest such claimed feature. In this regard, the Patent Office has relied on *Nishida et al* for disclosing the use of modified polyester elastomers with a polyamide resin, in order to improve impact resistance. See Official Action at page 2. Such document has or suggestion of employing at least one impact-resistance modifier comprising a polyolefin, in a composition for forming an internal layer of a tubular or pipe multilayer structure.

Accordingly, for at least the above reasons, withdrawal of the §103(a) rejection is respectfully requested.

Claims 12 and 14-18 stand rejected under 35 U.S.C. §103(a) as being obvious over *Nishida et al* in view of *Pipper et al*, and further in view of European Patent Document No. 0 646 627 (*Princiotta et al*). As noted above, independent claim 1 has been amended to recite that the at least one impact-resistance modifier comprises a polyolefin. Applicants submit that independent claim 1 is non-obvious over the above applied art for at least the following reasons.

In the Background section, *Nishida et al* discloses various attempts at improving the impact resistance of polyamide resins in order to disparage such attempts and disapprove of their use. Specifically, at column 1, lines 31-45, *Nishida et al* teaches that the use of a polyolefin as an impact-resistance modifier in a polyamide composition results in serious problems:

However, these compound materials involve many problems.... In a series of polyamide resins with which modified polyolefins or modified styrene/olefin copolymers are blended, as the amount of

blending, increases excellent inherent characteristics of the polyamide resins are lost, entailing poor moldability and degradation in oil, chemical and heat resistances.

Quite clearly, *Nishida et al* refers to a polyolefin impact-resistance modifier only to disparage the use of such compound, teaching that the use thereof results in poor moldability and degradation in oil, chemical and heat resistance characteristics.

Thus, *Nishida et al* teaches away from employing a polyolefin as an impact-resistance modifier in a polyamide composition. In view of such teaching away, the ordinarily skilled artisan would not have modified the *Nishida et al* polyamide composition to employ the polyethylene compound of *Princiotta et al* therein. The polyethylene disclosed by *Princiotta et al* is of the very type of compound that *Nishida et al* teaches results in poor moldability and degradation in oil, chemical and heat resistance characteristics.

Furthermore, in view of the nature of such disclosures of *Nishida et al*, it is respectfully but strenuously submitted that any reliance by the Patent Office on such disclosure in combination with *Pipper et al*, is untenable. The reason why *Nishida et al* mentions the use of such polyolefin is to disparage its performance and emphasize that use thereof results in unacceptable moldability, degradation in oil, chemical and heat resistance characteristics. Given the nature of this disclosure, the ordinarily skilled artisan would not have relied on such teachings of *Nishida et al* as a basis for further modification (e.g., with *Pipper et al*) to arrive at the claimed tubular or pipe multilayer structure. Clearly, the fundamental problems resulting from the use of polyolefin with a polyamide composition taught by *Nishida et al*, would have deterred the ordinarily skilled artisan from employing the polyethylene disclosed by *Pipper et al* in the manner suggested.

It is also respectfully noted that the applied art fails to disclose or suggest the use of the *Pipper et al* copolymer as the external, outermost layer of a multilayer structure. As discussed in the specification, Applicants have discovered that by use of the recited external and internal layers of the structure, excellent stress cracking resistance of the resulting structure can be attained, while maintaining acceptable barrier and mechanical properties. None of the applied documents fairly discloses or suggests the use of the recited composition comprising at least one thermoplastic polyamide and at least one impact-resistance modifier for the formation of an internal layer of the multilayer structure, in combination with the recited composition comprising as a polymer matrix a polyamide composition comprising (i) or (ii), for the formation of an external layer of the multilayer structure.

Accordingly, for at least the above reasons, withdrawal of the §103(a) rejection is respectfully requested.

Claim 13 stands rejected under 35 U.S.C. §103(a) as being obvious over *Nishida et al* in view of *Pipper et al*, and further in view of U.S. Patent No. 5,357,030 (*VanBuskirk et al*). Claim 26 stands rejected under 35 U.S.C. §103(a) as being obvious over *Nishida et al* in view of *Pipper et al*, and further in view of U.S. Patent No. 4,881,576 (*Kitami et al*). Withdrawal of the above rejections is respectfully requested for at least the following reasons.

The deficiencies of the alleged combination of *Nishida et al* and *Pipper et al* are discussed above. Such documents fail to disclose or suggest that the at least one impact-resistance modifier of the composition for forming the internal layer of a tubular or pipe multilayer structure, comprises a polyolefin, as recited in claim 1.

VanBuskirk et al and *Kitami et al* fail to cure the above-described deficiencies of *Nishida et al* and *Pipper et al*. In this regard, *VanBuskirk et al* has been relied on for disclosing the addition of a chain extender to polyamide 6. Official Action at page 5. *Kitami et al* has been relied on for disclosing a gasoline hose having specific characteristics. Official Action at page 6. However, like *Nishida et al* and *Pipper et al*, such secondary applied documents fail to disclose or suggest that the at least one impact-resistance modifier of the composition for forming the internal layer of a tubular or pipe multilayer structure, comprises a polyolefin, as recited in claim 1. Accordingly, for at least the above reasons, withdrawal of the §103(a) rejections is respectfully requested.

The dependent claims are allowable at least by virtue of their direct or indirect dependence from independent claim 1. Thus, a detailed discussion of the additional distinguishing features recited in the dependent claims is not set forth at this time.

From the foregoing, further and favorable action in the form of a Notice of Allowance believed to be next in order, and such action is earnestly solicited. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

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